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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,812	03/03/2004	Tsung-Hsi Yu	3167-181	1487

7590 06/29/2005

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EXAMINER

NGUYEN, THANH NHAN P

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/790,812

Applicant(s)

YU, TSUNG-HSI

Examiner

(Nancy) Thanh-Nhan P. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-16 is/are allowed.
- 6) ☒ Claim(s) 1-2, 4-6, 8 is/are rejected.
- 7) ☒ Claim(s) 3, 7, 9 and 10 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Objections

Claim 5 is objected to because of the following informalities:

Claim 5 currently read as, "The liquid crystal display of claim 1..." It appears it should have read as, "The liquid crystal display of claim 2..." since passivation film was not introduced in claim 1.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 6, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee U.S. Patent Application Publication No. 2002/0097353 in view of Huang et al U.S. Patent Application Publication No. 2004/0160546 and Yarita et al U.S. Patent No. 6,411,353.

Referring to claims 1 and 8, Lee discloses a liquid crystal display comprising: a liquid crystal display panel (170); a bottom frame (160), supporting said liquid crystal display panel; a metal cover (180), boxing said bottom frame therein and forming an interior space to accommodate said liquid crystal display panel; a print circuit board

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(200), fixed on a lower surface of said bottom frame and connecting to said liquid crystal display panel by a flexible flat cable (175), [fig. 5].

Even though Lee lacks disclosure of the bottom frame is a plastic frame, it was conventional at the time to use plastic frame as the bottom frame to support the liquid crystal display panel, as evidenced by Huang et al, [fig. 2, ref. # 310b], and therefore had the benefits associated with being conventional, such as the benefit of being available and the benefit of being suitable for the intended purpose. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have the bottom frame is a plastic frame for the benefit of being available and being suitable for the intended purpose.

Lee further lacks disclosure of and a conductive film, formed on a grounding pin, wherein the grounding pin is formed on a lower surface of printed circuit board, and another sidewall of said metal cover for transmitting segregated charges on said print circuit board through said metal cover to environment.

Yarita et al discloses a conductive film (MTP), formed on a grounding pin (GNDPT), wherein the grounding pin is formed on a lower surface of said print circuit board, and another sidewall of said metal cover (SHD), [fig. 1], for the benefit of being easy to electrically connect the grounding pattern of a flexible circuit board to the upper frame even if the width of the flexible circuit board becomes narrower along with the reduction of the frame border area, [col. 5, lines 10-15]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to formed on a grounding pin of said print circuit board and another sidewall of said metal

cover for the benefit of being easy to electrically connect the grounding pattern of a flexible circuit board to the upper frame even if the width of the flexible circuit board becomes narrower along with the reduction of the frame border area.

Referring to claim 2, Lee discloses a passivation film (85) taped on a lower surface of said print circuit board (90) for preventing short electric signals, [fig. 1].

Referring to claim 6, even though Lee lacks disclosure of the print circuit board connects to liquid crystal display panel through the flexible flat cable and attends with connecting devices such as tape automated bounding (TAB), chip on glass (COG), or chip on film (COF), it was conventional technique at the time to have the print circuit board connects to liquid crystal display panel through the flexible flat cable and attends with connecting devices such as tape automated bounding (TAB), as evidenced by Yarita et al, [col. 15, lines 58-61], and therefore had the benefits associated with being conventional, such as the benefit of being available and the benefit of being suitable for the intended purpose. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have the print circuit board connects to liquid crystal display panel through the flexible flat cable and attends with connecting devices such as tape automated bounding (TAB) for the benefit of being available and the benefit of being suitable for the intended purpose.

Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee in view of Huang et al and Yarita et al, and further in view of Levanon U.S. Patent No. 6,855,441.

Referring to claim 4, Lee lacks disclosure of the conductive film is taped on the grounding pin and metal cover by gluing.

Referring to claim 5, Lee lacks disclosure of conductive film is a conductive tape with both surfaces gluey, in which one surface of said conductive tape is taped on the grounding pin of said print circuit board and the sidewall of said metal cover and the other surface is used to glue a passivation film on a lower surface of said print circuit board to form an electric shielding upon devices on said print circuit board.

It was conventional at the time to use conductive tape with the surface(s) gluey to glue element(s) together, as evidenced by Levanon, [fig. 3b, ref.# 42], and therefore had the benefits associated with being conventional, such as the benefit of being available and the benefit of being suitable for the intended purpose. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have the conductive film is taped on the grounding pin and metal cover by gluing, or the conductive film is a conductive tape with both surfaces gluey, in which one surface of said conductive tape is taped on the grounding pin of said print circuit board and the sidewall of said metal cover and the other surface is used to glue a passivation film on a lower surface of said print circuit board for the benefit of being available and being suitable for the intended purpose.

Allowable Subject Matter

Claims 3, 7, and 9-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 11-16 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: None of prior art taught or disclosed a print circuit board assembled in a liquid crystal display comprising a plurality of flexible flat cables, extending from an edge of the print circuit board to a liquid crystal display panel; a grounding pin, formed on the print circuit board, wherein the position/location of the grounding pin is such as formed at opposite edges of printed circuit board without connecting flexible flat cable, extended from an edge of printed circuit board to the outside; a passivation film, covering an exposed surface of the print circuit board as an electric shielding; and a conductive film, taped on both said grounding pin and a metal cover of the liquid crystal display to transport segregated charges on the print circuit board to environment, and taped around the print circuit board to fix said passivation film.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lee U.S. Patent Application Publication No. 2002/0097353.

Huang et al U.S. Patent Application Publication No. 2004/0160546.

Yarita et al U.S. Patent No. 6,411,353.

Levanon U.S. Patent No. 6,855,441.

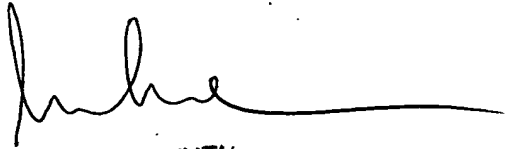
Any inquiry concerning this communication or earlier communications from the examiner should be directed to (Nancy) Thanh-Nhan P. Nguyen whose telephone number is 571-272-1673. The examiner can normally be reached on M-F/9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

June 24, 2005

TTN



DUNG T. NGUYEN
PRIMARY EXAMINER